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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/595,655      | 06/16/2000  | Shigeki Fujii        | 51270-245645        | 2592             |

7590 12/15/2004  
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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2643

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/595,655 | <b>Applicant(s)</b><br>FUJII, SHIGEKI |  |
|                              | <b>Examiner</b><br>Lun-See Lao       | <b>Art Unit</b><br>2643               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Introduction***

1. This action is response to the amendment filed on 08-23-2004. Claims 1,4,6,13 and 16 have been amended and claims 1-16 are pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tubman (US PAT 5,569,038).

Consider claim 6, Tubman teaches a sound processing apparatus comprising:  
a signal separator (see fig.1, 34) that separates an input audio signal of at least one system into a plurality of separated signal components (12,14,16,18) corresponding respectively to a plurality of different types of sound source (such as, Music, vocal, acoustic prompt);

a sound processor (34) that subjects each signal component of at least part of the plurality of separated signal components to individual sound processing suitable for the signal component (see col.8 line 35-col.9 line 25); and

an output controller (26) that outputs the plurality of separated signal components (36,59,57) as at least one audio signal after each signal component of the at least part thereof is subjected to the individual sound processing (see col.10 line 1-40).

Consider claims 7-8, Tubman teaches a sound processing apparatus of the output controller (see fig.1, 26) synthesizes (see fig.1, 34) the plurality of separated signal components (12,14,16,18) with the at least part thereof subjected to the individual sound processing into a synthesized audio signal, and outputs the synthesized audio signal (38, see col.9 lines 4- 25); and a sound processing apparatus of the output controller (26,34) outputs the plurality of separated signal components (36,57,59) with the at least part thereof subjected to the individual sound processing, separately as audio signals (col.9 line 4-25).

As to claims 1-3, these are method claims of claims 6-8 respectively. Thus note claims 6-8, respectively for rejection.

Consider claim 4, Tubman teaches a sound processing method of the input audio signal contains an ambient sound component (see fig.1, 12,14 (music)) and an on-the-spot speech sound (16,18, (vocal or acoustic prompt)) component of a live broadcasting, and said at least part of the plurality of separated signal components (see fig.1, 12,14,16,18) comprises said ambient sound component (music) and said on-the-spot speech sound component (vocal or acoustic prompt and see col.10 lines 1-40),

Consider claim 5, Tubman teaches a sound processing method of the sound processing comprises sound field control processing (see fig.1, 8 console and col. 10 lines 1-40).

Consider claims 12-13, Tubman teaches that a sound processing apparatus as of the sound processor comprises a sound field controller (see fig.1,8 (console)) that performs sound field control processing upon each signal component of the at least part of the plurality of separated signal components (36,57,59 and see col.10 line 1-40); and a sound processing apparatus of the sound processor selectively eliminates (see fig.1, 26,34) at least part of the plurality of separated signal components (12,14,16,18), and instead uses an externally input audio signal (see col.10 line 1- 40).

Consider claims 14-16, Tubman teaches a sound processing apparatus (see fig.1,8) of the sound processor changes (26,34) sound quality or voice quality of each signal component of at least part of the plurality of separated signal components (see fig.1, 12,14,16,18 and col.10 line 1- 40); and a sound processing apparatus (see fig.1,8) of the sound processor changes pitch (by console) of each signal component of at least part of the plurality of separated signal components (see col.10 line 1-40); and a sound processing apparatus (see fig.8) of the sound processor (26,34) changes speed relative to a time axis (time delay) or speech speed of each signal component of at least part of the plurality of separated signal components (see col.9 line 42-67).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tubman (US PAT. 5,569,038).

Consider claim 9, Tubman (fig.1) does not clearly teaches a sound processing apparatus of the signal separator performs spectrum analysis upon said input audio signal to extract a specific signal component, and subtracts the extracted specific signal component from the input audio signal to obtain a remaining signal component.

However, Tubman (fig.8) teaches a sound processing apparatus of the signal separator (see fig.8,56) performs spectrum analysis upon said input audio signal to extract a specific signal component , and inherently subtracts (by faders)) the extracted specific signal component from the input audio signal to obtain a remaining signal component of the input audio signal (see col. 15 lines 20-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of fig.8 into the teaching of fig.1 to provide more choice to adjust the separated audio signal to the user.

Consider claims 10-11, Tubman teaches a sound processing apparatus of the signal separator (see fig.8, 56) comprises a plurality of signal enhancement/suppression devices (78, 79, 80, 81 and 92) that enhance part of a plurality of signal components contained in said input audio signal, and suppress remaining signal components (see col.15 line 20-62); and a sound processing apparatus of the input audio signal comprises audio signals of a plurality of channels (see fig.8, 56), and said signal separator comprises a plurality of signal separators (music, vocal, prompt, mic) corresponding respectively to said plurality of channels, and wherein each of said

plurality of signal separators (18f and 18n) performs predetermined sound processing by supplementarily referring to at least one of the audio signals of at least one other channels than a channel corresponding thereto, thereby improving accuracy of separation of the input audio signal of the corresponding channel into a plurality of separated signal components (see col.15 line 20-62).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. Hirai (US PAT 5,541,999) and Sone (US PAT. 5,569,869) are recited to show other related to sound processing method and apparatus.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao,Lun-See  
Patent Examiner  
US Patent and Trademark Office  
Crystal Park 2  
(703305-2259)

  
DUC NGUYEN  
PRIMARY EXAMINER